

AMENDMENTS TO THE CLAIMS

1. – 34. (Cancelled)

35. (currently amended) An apparatus for making reinforcement ply material comprising an elastomeric sheet and a plurality of reinforcement elements embedded therein; wherein the reinforcement elements are grouped in untwisted sets and each set contains a plurality of reinforcement elements; wherein adjacent reinforcement elements in the same set are spaced apart an intra-set distance and adjacent reinforcement elements in different sets are spaced apart an inter-set distance; and wherein the inter-set distance is greater than the intra-set distance; said apparatus comprising:

an extruder and a die head into which the extruder extrudes an elastomeric material;

wherein the die head defines a die throat and includes a guide insert which guides the reinforcement elements into the die throat;

wherein the guide insert comprises passages through which the reinforcement elements pass and which are arranged in a pattern corresponding to the arrangement of the reinforcement elements in the reinforced ply material;
~~wherein the guide insert includes a~~ such that one passage is provided for each set of reinforcement elements; and

~~wherein the passages are laterally spaced from each other a distance corresponding to the inter-set distance; and~~

wherein ~~the passages are~~ each passage is rectangular in cross-section shape and configured to define the position and spacing of the reinforcement elements of one of the sets of reinforcement elements in the reinforcement ply material.

36. (new) The apparatus of claim 35, wherein each passage reduces the potential for transverse misalignment of the reinforcement elements in each set.

37. (new) The apparatus of claim 35, wherein each passage has a uniform rectangular cross-section along its length.
38. (new) The apparatus of claim 35, wherein the lateral distance between passages is between about 0.20 mm and about 0.50 mm.
39. (new) An apparatus for making reinforcement ply material that includes an elastomeric sheet and a plurality of reinforcement elements embedded therein, the reinforcement elements being grouped in sets such that each set includes at least two reinforcement elements, wherein adjacent reinforcement elements in the same set are spaced apart an intra-set distance and adjacent reinforcement elements in different sets are spaced apart an inter-set distance that is greater than the intra-set distance, the apparatus comprising:
an extruder and a die head into which the extruder extrudes an elastomeric material;
the die head defining, at least in part, a die throat and including a guide insert, the guide insert including a plurality of passages through which the reinforcement elements pass, the passages being arranged in a pattern corresponding to the arrangement of the reinforcement elements in the reinforced ply material such that one passage is provided for each set of reinforcement elements;
each passage configured to guide the reinforcement elements of one of the sets of reinforcement elements into the die throat; and
each passage having a uniform rectangular cross-section along its length, each passage being configured to define the position and spacing of the reinforcement elements of one of the sets of reinforcement elements in the reinforcement ply material.
40. The apparatus of claim 39, wherein each passage reduces the potential for transverse misalignment of the reinforcement elements in each set.
41. (new) The apparatus of claim 39, wherein the lateral distance between passages is between about 0.20 mm and about 0.50 mm.

42. (new) An apparatus for making reinforcement ply material that includes an elastomeric sheet and a plurality of reinforcement elements embedded therein, the reinforcement elements being grouped in sets such that each set includes at least two reinforcement elements, wherein adjacent reinforcement elements in the same set are spaced apart an intra-set distance and adjacent reinforcement elements in different sets are spaced apart an inter-set distance that is greater than the intra-set distance, the apparatus comprising:
an extruder and a die head into which the extruder extrudes an elastomeric material;
the die head defining, at least in part, a die throat and including a guide insert, the guide insert including a plurality of passages through which the reinforcement elements pass, the passages being arranged in a pattern corresponding to the arrangement of the reinforcement elements in the reinforced ply material such that one passage is provided for each set of reinforcement elements;
each passage configured to guide the reinforcement elements of one of the sets of reinforcement elements into the die throat and to define the position and spacing of the reinforcement elements of one of the sets of reinforcement elements in the reinforcement ply material, each passage including a front end having a cross-section and a rear end having a cross-section, the cross-section of the front end of each passage having substantially the same shape as and being dimensioned substantially similar to the cross-section of the rear end of each passage.
43. (new) The apparatus of claim 42, wherein the cross-section of the front and rear ends of each passage is rectangular cross-section.
44. (new) The apparatus of claim 43, wherein each passage reduces the potential for transverse misalignment of the reinforcement elements in each set.
45. (new) The apparatus of claim 42, wherein each passage has a uniform cross-section along its length.

46. (new) The apparatus of claim 42, wherein the lateral distance between passages is between about 0.20 mm and about 0.50 mm.
47. (new) The apparatus of claim 42, wherein the cross-section of the front and rear ends of each passage is circular is cross-section.